6. Public Safety

The snow lay deep on the Sierras, and every mountain creek became a river, and every river a lake. Each gorge and gulch was transformed into a tumultuous watercourse that descended the hillsides, tearing down giant trees and scattering its drift and debris along the plain. Red Dog had been twice under water, and Roaring Camp had been forewarned. 'Water put the gold into them gulches,' said Stumpy. 'It's been here once and will be here again' And that night the North Fork suddenly leaped over its banks, and swept up the triangular valley of Roaring Camp.

The Luck of Roaring Camp
Francis Bret Harte (1836–1902)

Requirements

The Safety Element is a required element of the general plan. Pursuant to the California Government Code Section 65302(g), the purpose of the Safety Element is to protect the community from unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; and subsidence, liquefaction and other seismic or geologic hazards known to the city. The element also must address flooding, and wild land and urban fires.

The Safety Element must include mapping of known seismic and other geologic hazards, address evacuation routes, military installations, peak load water supply requirements, and minimum road widths and clearances around structures as those items relate to identified fire and geologic hazards.

The element must be prepared after consultation with the Department of Conservation, Division of Mines and Geology (now the California Geological Survey) and the Office of Emergency Services. Prior to adoption, the Safety element must be submitted to the California Geological Survey along with technical studies used in developing the element.

Issues and Opportunities

Emergency/Disaster situations that could affect Angels Camp include:

- Geological Hazards (earthquakes, unstable slopes, collapsing mines, dissolving limestone, erosive soils, volcanic activity)
- Floods
- Hazardous Materials
- Fire
- Interruption or Contamination of Water Supply
- Transportation Accidents
- Severe Weather
- Agricultural Disasters
- Radiological Incidents
- Civil Disturbances
- Interruptions or Failures of Utilities or Other Infrastructure

Organization

For organizational purposes, this element is divided into the following sections:

Table 6-1
Organization of Public Safety Element

Section	Issue	Description
6A	**Geologic Hazards**	Addresses seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, slope instability leading to mudslides and landslides, subsidence, liquefaction and other seismic or geologic hazards known to the City including those associated with collapsing mines. Volcanic activity also is addressed in this section.
6B	**Flood Hazard and Dam Failure**	Addresses the potential for flooding within the City and evaluates the potential for dam failures to impact the City.
6C	**Emergency Services Plan & Emergency Services**	Addresses hospitals, ambulance (ground and air) services, and evacuation routes.
6D	**Hazardous Materials**	Addresses those establishments identified within and near Angels Camp that store these materials and the potential for hazardous material spills.
6E	**Water Supply, Utilities & Communications**	Addresses peak load demand for Angels Camp and issues associated with water quality and water quantity during emergencies and addressing interruption of sewer services, electrical, communication, gas and other utility services.
6F	**Transportation, Severe Weather, Radiological Incidents, Civil Disturbances**	Addresses transportation accidents, severe weather, radiological incidents, and civil disturbances.
--	**Fire Protection**	Fire protection is addressed in the Public Facilities and Services Element of the Angels Camp General Plan (**Chapter 7**). That element addresses levels of service provided by the Angels Camp Fire Department and mutual aid agencies (e.g., California Department of Forestry and Fire Protection), including minimum road widths and clearances around structures.
--	**Law Enforcement**	Law enforcement is addressed in the Public Facilities and Services Element of the Angels Camp General Plan **(Chapter 7**). That element addresses levels of service provided by the Angels Camp Police Department, Calaveras County Sheriff's Department, California Highway Patrol and the County's Court System.
--	**Military Installations Agricultural Disasters**	There are no military installations located in or near Angels Camp. Therefore, issues related to protection of military installations are not addressed herein. There are no commercial agricultural operations within the City, therefore, issues related to Agricultural disasters are not addressed herein.

6A. Geologic Hazards

A. Seismic Hazards

Seismic hazards within Calaveras County include potential ground rupture, ground shaking, and ground failure during earthquakes. Seismic hazards that could affect Angels Camp are evaluated in the Calaveras County General Plan and summarized as follows:

Ground Rupture and Ground Shaking

Numerous fault systems have the potential to produce ground rupture and/or ground shaking in Calaveras County and Angels Camp:

Sierran Frontal Fault System

The Sierran Frontal fault system is located along the eastern Sierra Nevada. The Carson Valley fault, located within this system, passes within a few miles of the county's highest elevations and is considered capable of generating earthquakes of approximately magnitude seven, which could be felt in Angels Camp.

Foothills Fault System

The Foothills Fault System extends across the lower elevations of Calaveras County between Murphys and New Hogan Reservoir. The system includes two primary fault zones: the Melones Fault Zone (along the eastern edge of the Foothill Fault System) and the Bear Mountain Fault Zone (located on the western side of the Foothills Fault System). The Melones Fault Zone is classified as active (i.e., has demonstrated displacement within the last 100,000 years). Based on historical data, the California Geologic Service determined that the Melones Fault Zone is capable of generating a Richter 6.5 maximum credible earthquake with an estimated recurrence of a strong quake along the fault to be on the order of 25,000 years (as compared to 250 years on the San Andreas Fault System).

San Andreas Fault System

All of the three primary branches of this fault system - the San Andreas Fault, the Hayward Fault and the Calaveras Fault - are considered capable of affecting the county, primarily through ground shaking.

Other Fault Systems

Less active faults existing between the Calaveras Fault and the western margin of the Sacramento Valley include the Greenville Fault, which produced quakes of Magnitude 5.8 and 5.3 in January, 1980. Shaking from these quakes was felt in Calaveras County.

In summary, moderate rather than devastating quakes are likely to occur in the vicinity of Angels Camp.

The International Conference of Building Officials (ICBO) designated all of the United States into four zones based on likelihood of earthquake in the area. The larger the number (1-4), the higher the likelihood of earthquake occurring. All of California is designated as either Zone 3 or Zone 4. Calaveras County is located within Seismic Zone 3. The Uniform Building Code (UBC) includes building standards for each zone with construction standards for the strongest buildings able to withstand significant ground shaking required in Zone 4 with lesser standards for strength in Zone 1. Compliance with the construction standards of the UBC (Current Edition) for Seismic Zone 3 reduces the likelihood of damage to structures from ground shaking associated with moderate earthquakes in Angels Camp.

Typically, buildings constructed since the mid-1970s in accordance with modern codes have performed well during earthquakes. However, many of the older buildings within Angels Camp could be subject to damage as a result of earthquakes. Specifically:

- Concrete-frame structures, pre-1976. Angels Camp has relatively few buildings of this type and generally house industrial activities. Collapse of these buildings could create economic losses and potentially release hazardous materials. Strengthening these buildings is considered a relatively inexpensive procedure.

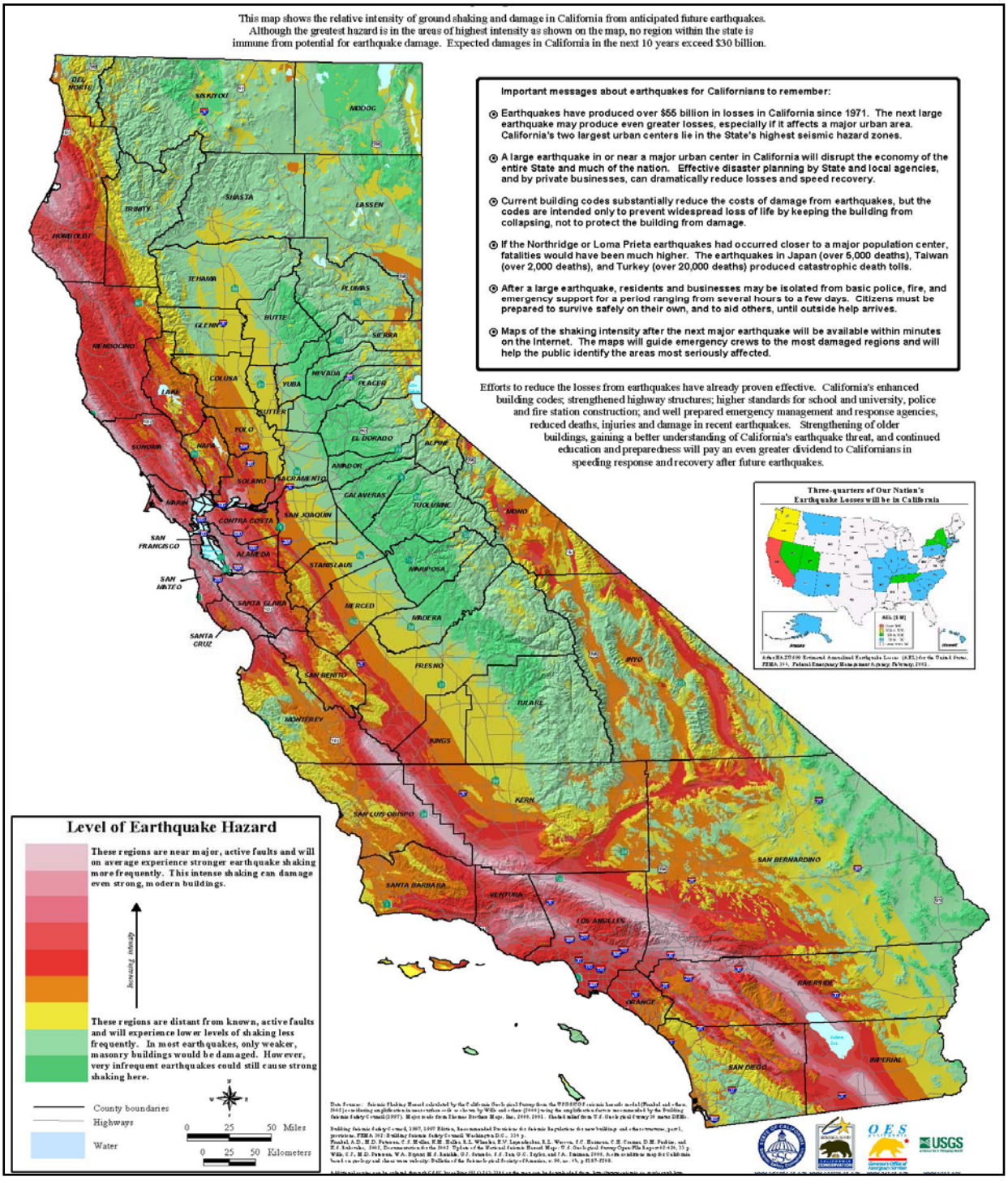
- Unreinforced Masonry Buildings. Many of these structures exist within the historic core of the city. Generally, retrofitting these buildings is expensive and requires special care to retain the historic integrity of the structure.

- Unbraced Parapets and Architectural Trim. While individual buildings may be structurally sound, architectural trim may present a hazard unless it is adequately attached or braced. Architectural trim is found on many of the structures within the city's historic district.

Ground Failure

Ground shaking result in liquefaction, lateral spreading, lurching and differential settlement, which may occur in unconsolidated, fine grained, water-saturated sediments typically found in valleys. Based on the known geology and topography of the city, it is not anticipated that these types of seismically-related ground failures would occur within the city unless development has been located on incompetent fill materials. Soils disturbed by grading may result in differential settlement of soils without proper implementation of engineered grading plans.

Figure 6-1
Earthquake Shaking Potential for California



Seiches and Tsunami

Seiches are earthquake-generated waves within enclosed or restricted bodies of water such as lakes or reservoirs. The waves are generated by oscillation or rocking back and forth (like rocking in a bathtub until the "waves" grow large enough to spill out of the tub). Seiches are most commonly observed in swimming pools during earthquakes (although swimming pools normally hold insufficient water to create a threat to life and property from seiches). The main body of the New Melones Reservoir is located nearly four miles south of the city and at an elevation of more than 700 feet below that of Angels Camp. Therefore, even if a seiche was generated within New Melones, is unlikely to present a hazard to Angels Camp. Further, there is no evidence that seiches have ever occurred in lakes and reservoirs in the general area. Therefore, seiches present an unlikely threat to Angels Camp.

Because Angels Camp has no land within proximity to a seacoast, there is no potential for tsunami (i.e., tidal wave).

B. Geologic Hazards

Unstable Slopes/Landslides/Erosive Soils/Erosion

Soils within Angels Camp generally range between 12 and 100 inches deep, are well drained, display moderately slow to moderately rapid permeability, and have a slight to moderate erosion hazard. The potential for erosion of soils increases with the steepness of a slope. Generally, slopes in excess of 30% present a high potential for slope failure/erosion. A few of the areas within the City with slopes of 30% or greater are located along the banks of Angels Creek and along Gold Cliff Road.

Grading activities remove natural vegetative cover that protects soils from erosion. As a result, grading plans should include erosion control plans with a specified timeline for implementation to reduce the erosion of soils.

Additional information pertaining to soils is found in the General Plan Conservation and Open Space Element. **Appendix 4E** illustrates the distribution of the various soil types present in the Angels Camp Sphere of Influence pursuant to the "*Report and General Soil Map, Calaveras County, California*," June, 1966, prepared by the USDA Soil Conservation Service (now USDA Natural Resources Conservation Service). **Appendices 4E** and **4H** describe characteristics of these soil types.

Subsidence and Differential Settlement – Mines

Subsidence is settling of the ground surface in response to fluid withdrawals, mine excavations, solution cavity (i.e., cave) collapse or hyrdocompaction. Differential settlement is a form of subsidence in which one soil mass settles at a different rate than an adjacent soil mass.

Settlement due to fluid (e.g., oil, water) withdrawal is unlikely since oil deposits have not been discovered in Calaveras County and sizeable withdrawals of groundwater by agriculture does not exist on a large scale.

Past mining activity has created a subsurface system of miles of tunnels and shafts, primarily excavated in hard rock. These tunnels and shafts have collapsed in the past and will continue to collapse in the future as the tunnels and shafts continue to fill with water and supporting timbers decay and crumble. It is likely that subsidence in the vicinity of water lines, sewer lines, or drainage structures could also affect the ability of those facilities to function.

Limestone is found within the Angels Camp Sphere of Influence; however, it is believed absent within the city limits. Limestone is a generic term for carbonate bedrock subject to solution cavities (i.e., the formation of "caves") when limestone is dissolved by groundwater. If these "caves" are located near the ground surface, collapse can occur, resulting in sink holes. Similarly, the location of private septic systems within limestone areas is problematic due to the drainage of sewage into caves, with minimal leaching, and ultimately into groundwater. Because new development within the city is required to connect to a public sewer system, the threat of groundwater contamination from septic systems is unlikely.

Differential settlement occurs when a structurally incompetent man-made or natural fill area is located adjacent to a competent fill or bedrock. Foundation loads spanning the two differing soil masses may be supported unequally, resulting in uneven settling of the foundation. This can be avoided through proper evaluation of soils prior to construction with testing and foundation engineering employed to resolve the problem prior to construction.

Volcanic Activity

There are no active volcanoes identified in Calaveras County. However, volcanic eruptions from Mammoth Lakes, located approximately 85 air miles (160± driving miles) southeast of the city, could occur. Explosive eruptions would create volcanic ash or streams of hot ash and rock mixed with hot gases into the air. Non-explosive eruptions could result in lava flows and domes with associated gas emissions.

Angels Camp is most likely to be impacted by the clouds of volcanic ash that could result from an eruption at Mammoth Lakes (an ash layer of up to a few inches and including anything from fine dust to fist-size rocks). For comparative purposes, the eruption of Mount St. Helens in 1980 spread ash over an area of 22,000 square miles with a one-inch layer of

ash within a 60 mile radius downwind and a half-inch layer of ash within 300 miles of the eruption. Large rock fragments are likely to blow only six miles from the volcano and therefore are not expected to impact Angels Camp.

Ash from one-half to a few inches thick could:

- Halt traffic (clogging engines)
- Disrupt electrical services, transportation, business, water supply and communications services
- Hamper visibility
- Create darkness (depending on severity of the eruption)
- Affect those with respiratory problems
- Muddy water
- Result in chemical contamination of water
- Cause rapid wearing of machinery
- Clog air filters
- Block drains and water intakes
- Injure vegetation
- Generate electrical storms (potentially starting fires or disrupting radio communications)
- Short-circuit electrical systems (damp ash)

Unlike earthquake or wildland fires, for which many city residents have had some limited experience, most city residents would be unlikely to know how to respond to a volcanic eruption [e.g., close and lock windows and exterior doors; turn off fans, heating and air conditioning systems; close the fireplace damper; go to an interior room without windows; bring in pets; use duct tape and plastic sheeting (heavier than food wrap) to seal all cracks around the door and vents into the room]. To assist in reducing panic and facilitating self-help in emergency situations, the city should consider citizen preparedness in its emergency response planning efforts.

6B. Flood Hazard & Dam Failure

Flooding may occur from heavy, prolonged rain and/or rapid spring thaw. Widespread or localized flooding could involve extensive life and property loss, interruption of transportation and communication systems, and similar facilities. Primary waterways within the Angels Camp Sphere of Influence include:

Table 6-2
Streams, Tributaries within the City of Angels Sphere of Influence and Area of Interest

Stream Name	USGS Classification/a/	Headwaters	Destination
Six Mile Creek	Perennial	T3N, R14E, Sec 8 (just above Six-mile Ranch)	Melones Reservoir, Stanislaus River
Indian Creek	Intermittent	T3N, R13E, Sec. 25	Melones Reservoir, Stanislaus River
Angels Creek	Perennial (portions) Intermittent (portions)	T4N, R14E, Sec. 26	Melones Reservoir, Stanislaus River
Greenhorn Creek	Intermittent	T3N, R13E, Sec 28, 32, 33	Melones Reservoir, Stanislaus River
Cherokee Creek	Perennial	T3N, R13E, Sec. 20	Hogan Reservoir, Calaveras River
Utica Ditch	Perennial	North Fork of the Stanislaus 21 miles above Murphys Forebay	Murphys Forebay, Angels Forebay
Jupiter Ditch	Perennial	T3N, R13E, Sec. 20 Reservoir	Utica Ditch
Lone Gulch	Intermittent	T3N, R13E, Secs. 20, 30	T3N, R12E, Sec. 24 Reservoir to San Domingo Creek and Calaveras River
San Domingo Creek	Perennial (portions) Intermittent (portions)	Stanislaus National Forest near Hathaway Pines. T4N, R15E, Sec. 19 A tributary originates west of Avery in T4N, R15E, Sec. 12	South Fork of the Calaveras River to New Hogan Reservoir
New Melones Reservoir	--	Headwaters of the Stanislaus River and the headwaters of multiple creeks	--

/a/ Definitions

Perennial:	Normally flows almost year-round (usually at least into early summer)
Intermittent:	Normally flows in the spring, fall and winter during the rainy season
Ephemeral:	Flows primarily in association with a storm event

Other water bodies within the city's planning area include:

- The City's Water Treatment Plant
- The City's Wastewater Treatment Plant
- Union Public Utility District Water Treatment Plant
- Ross Reservoir
- Holman Reservoir

The flood potential of theses waterways and water bodies within Angels Camp was evaluated by the Federal Emergency Management Agency (FEMA) National Flood Insurance Program in 1997 and resulted in the designation of the flood zones within the Angels Camp Sphere of Influence **(Appendix 4I)**.

Dam Failure

Dam failure could occur in one of the many large or small dams in Calaveras County, which could cause loss of life and property, flooding, interruption of transportation (in particular the Highway 4/49 bridges at the southern end of the city), communication systems, etc.

Large dam failures that could ultimately inundate portions of the city include those at the Utica Reservoir (formed by five small dams located upstream of the North Fork Diversion Dam and holding 2,334 acre feet), Union Reservoir (located upstream of the Utica Reservoir and formed by seven small dams and containing 3,130 acre feet), and Lake Alpine (a series of five small dams forming a 4,117 acre-foot reservoir). These facilities are operated by the Northern California Power Agency (NCPA) as part of NCPA's Upper Utica Project, which is located in the Stanislaus National Forest and managed by the U.S. Forest Service. These reservoirs regulate water flows for downstream power generation.

The New Spicer Meadow Reservoir is part of the North Fork Stanislaus River Hydroelectric Project, which is operated by the NCPA in cooperation with the licensee, the Calaveras County Water District (CCWD). Failure of dams at this reservoir also could impact Angels Camp. The facility holds 4,060 acre feet of water.

FERC regulations require the operators of these reservoirs to prepare an inundation map indicating areas that could be affected by dam failure. Those maps indicate flooding would occur within the existing Stanislaus River basin without overtopping the river banks, and without impacts to Angels Camp.

Failure of the dam at Ross Reservoir has the potential to inundate French Gulch and the Utica Ditch. The capacity of Ross Reservoir is unknown. An analysis of the potential threat to people and property within Angels Camp from a failure of the Ross Reservoir Dam has not been conducted.

Failure of the dam at Holman Reservoir (the city's wastewater treatment facility) would result in flows into Angels Creek downstream of the city. While this failure would affect water quality within Angels Creek, it is not anticipated to create a threat to life or property within the city limits. Further, the city's drinking water supply is located well up-stream of the facility and is unlikely to be affected by failure of the Holman Reservoir dam.

Results of a failure of the dam at the Union Public Utility District Water Treatment facility located near Murphys has not been studied, but could result in inundation of portions of the city.

6C. Emergency Services Plan & Emergency Services

Emergency Operations Plan, Hazard Management Plan and Local Hazard Mitigation Plan
The Federal Emergency Management Agency (FEMA) requires the preparation of three primary emergency response plans as follows:

- The Emergency Operations Plan - which addresses the organizational structure of the local jurisdiction and how each component of the organization responds to emergencies

- The Local Hazard Mitigation Plan - which identifies the likely threats to the region

- Hazard Management Plan - which identifies how the local jurisdiction will respond to an emergency

The Multi-Agency Coordination Group (MAC) is a multi-agency, multi-jurisdictional team that sets the objectives for emergency operations within the county and makes final decisions relative to the preceding plans. The Angels Camp Police Chief represents the city on this agency. The group meets monthly or bi-monthly.

The Calaveras County Office of Emergency Services is located at the county airport. The operational area coordinator for emergency response for the county is a representative of the Calaveras County Sheriff's Offices.

Calaveras County prepared and adopted the *Calaveras County Multihazard Function Plan (*aka *Emergency Operations Plan*) in 1992 with an update in 1999. Calaveras County is working in cooperation with Angels Camp to complete a Hazard Management Plan (a new component of emergency response planning required by FEMA). Angels Camp does not currently have either an emergency operations plan or a local hazard mitigation plan to guide emergency situation response.

In addition, the 39th District Agricultural Association adopted an "Emergency Policy Manual" in 1991 to guide emergency operations at the Calaveras County Fairgrounds in the event of emergency.

Emergency Medical Services
Calaveras County has one hospital, located at 768 Mountain Ranch Road, San Andreas. Mark Twain St. Joseph's Hospital is a 48-bed hospital owned and operated by Catholic Healthcare West. Four satellite medical centers are operated by the hospital. As of 2005, the facility in Angels Camp is open seven days a week from 9:00 a.m. - 5:30 p.m.

Emergency medical response services are provided within the City by the Angels Camp Fire Department and one private ambulance company. Ground ambulance service is provided in Angels Camp by American Legion Ambulance Service. One ambulance is routinely stationed in Angels Camp on Bush Street, near Utica Park. Ambulances are staffed by at lease one paramedic per ambulance.

Air ambulance services are provided by multiple private air ambulance services transporting patients to Modesto, Sacramento, University of California Davis Medical Center and other hospitals.

American Red Cross

The American Red Cross provides disaster relief and recovery in Calaveras County and within Angels Camp. The Red Cross is most frequently called upon to provide relief to residents who have lost their home in a fire, although the agency also provides relief for large-scale disasters.

The Red Cross also trains local volunteers, assisting in the development of Citizen Emergency Response Teams (CERTs) and provides Cardiopulmonary Resuscitation (CPR), Auto External Defibrillator (AED) and First Aid training for individuals and professionals. Historically, there have been few or no citizens within the City Limits completing CERT training and few residents in unincorporated Calaveras County have completed CERT training. The existing CERT members are under the supervision of the Calaveras County Office of Emergency Services. CERTs can be established to assist small populations such as a residential subdivision, mobilehome parks, or even a city. Team members receive ongoing training. There is no minimum number of individuals required to form a CERT.

6D. Hazardous Materials

Hazardous materials that could be encountered as a result of a spill or release within the city include:

- Herbicides
- Pesticides
- Chemicals in gaseous, liquid and solid form
- Flammable explosives
- Petroleum products
- Toxic Waste
- Radioactive substances
- Mining wastes

Hazardous materials may be associated with transportation accidents or occur in a fixed production or storage facility. Both accidental and sabotage-related releases are possible as are ones from clandestine drug labs. Countywide, the three highest risks from hazardous materials have been identified as: hazardous waste from drug labs, roadside abandonment of equipment containing hazardous materials from the San Joaquin Valley (in an effort to avoid disposal costs), and the potential for chlorine gas leaks from water and wastewater treatment facilities. Both short-term and long-term contamination of an affected area is possible depending upon the situation.

In addition, historic mining activity included the treatment of extracted ore, the "tailings," with mercury, cyanide, and other hazardous materials. In addition, the processing of mined ore tended to concentrate naturally occurring arsenic, copper, zinc and similar materials. The processed "tailings" were typically discharged directly into creeks and streambeds and sometimes into holding or settling ponds. Discharge points of processed mining waste represent a potential hazard through activities that displace or dislodge these materials.

The Calaveras County Health Department, Division of Environmental Health is the Certified Unified Program Agency (CUPA) with oversight of hazardous materials for Calaveras County. The county also is responsible for review and approval of Hazardous Materials Business Plans required of those businesses and facilities storing or using hazardous materials. The city responds to calls related to hazardous material spills or releases and calls on the Calaveras County Environmental Health Department for support, if needed. The primary responder for hazardous material-related calls within the city is the Angels Camp Fire Department with assistance from the Calaveras County Hazmat/OES for larger spills and releases. The California Highway Patrol may assist with roadway spills of hazardous materials.

Household Hazardous Waste:

The City of Angels has adopted the *Multi-Jurisdictional Household Hazardous Waste Element*, prepared in cooperation with Calaveras County in 1996. The goals of the Household Hazardous Waste Element are to reduce the amount of household hazardous waste generated through reuse and recycling; diversion of materials from landfills; promoting alternatives to toxic household products; and educating the public regarding household hazardous waste management.

Calaveras County offers an annual household hazardous waste drop-off day at the county fairgrounds located just south of Angels Camp. This provides the only opportunity for Angels Camp residents to dispose of household hazardous wastes without traveling a long distance to the Rock Creek transfer station in Milton.

The county is investigating an expansion of the Red Hill facility to allow disposal of u*niversal waste*, which would permit the site to accept some classes of household hazardous wastes for city residents.

6E. Water Supply, Utilities & Communications

Water supply during non-emergency situations is addressed in the Public Facilities and Services Element (Chapter 7) of the Angels Camp General Plan. Water supply during emergency situations is addressed herein.

The water supply for Angels Camp originates on the watershed of the North Fork of the Stanislaus River. During the winter months, water is stored in four reservoirs in the High Sierra near Ebbetts Pass Highway (State Route 4). These reservoirs are: Alpine, Utica, Union, and Spicer, which have a combined storage of 13,643 acre feet.

Water from these reservoirs is released down the North Fork of the Stanislaus River and its tributaries, where it is diverted into the Utica Ditch. The Utica Ditch is a twenty-one mile ditch system that terminates at the Murphys Forebay. The water in the forebay then enters the Murphys Penstock and is used for generating electric power at the Murphys Powerhouse, which is located on the eastern edge of the town of Murphys.

After the water passes through the Murphys Powerhouse, it enters Angels Creek (a.k.a. Murphys Creek) and is diverted into the Angels Ditch just below Murphys. This 5.5 mile ditch delivers water through Ross Reservoir to the Angels Forebay, which is the raw water take-out point for the Angels Water Treatment Plan. Water not used by the Angels Water Treatment Plant is used for power generation through the Angels Powerhouse.

The city provides public water to its residents. The city maintains a water treatment and storage facility northeast of the city limits off of Murphys Grade Road.

Emergency situations related to water supply are associated with water quantity and quality.

Water

The current peak load water demand for Angels Camp is approximately 2 million gallons per day. A single water storage facility provides water for Angels Camp and is located outside the city limits off Murphys Grade Road. The system stores 2.5 million gallons providing between 1 and 1.25 days of water (peak demand) in the event of an emergency that disrupts the water distribution system.

A failure of the county's more than 21 miles of water supply ditches, damage to the city's water storage facility, contamination of water supplies within upstream reservoirs, or drought could result in a full or partial loss of water supply to the city.

In September 2001, the Darby Fire burned through a wooden trestle and the Utica Flume, supporting a portion of the Utica Ditch (a part of the Calaveras County water supply system) nearly rendering Angels Camp without water (Ross Reservoir remained as a water supply reserve for the city) and illustrating the vulnerability of water supply systems dependent upon ditch distribution.

Drought occurs in approximately 7-to-11-year cycles in Calaveras County. Chapter 14.90 of the City of Angels Municipal Code addresses emergency water conservation and was originally intended to address drought situations. The chapter addresses Phase I conservation (mandatory conservation with public notification) and Phase II conservation (restricted use of potable water) including limits on watering gardens, washing vehicles, and water wasting.

Naturally occurring contamination (e.g., chemical, bacteriological, parasitic), accidental spills or sabotage also could affect water quality.

Utility Failures

Utility facilities within the city include liquid petroleum, electricity, water (see above), and sewage disposal. Interruptions to utility services delivered through above or below-ground pipelines, ditches or electrical lines could suffer service interruptions from earthquakes, floods, fire, wind storms, landslides, system (mechanical) failures, sabotage or similar events.

6F. Transportation, Severe Weather, Radiological Incidents, Civil Disturbance

Transportation Accidents (including aircraft and rail accidents)
Major east-west commercial air transportation routes pass directly over parts of Calaveras County. The Calaveras County Airport, located north of the city, serves the needs of private aircraft. From June through mid-October, the California Department of Forestry and Fire Protection operates firefighting aircraft out of the Columbia Airport Air Attack Base south of the city.

Crash, derailment, or collision involving aircraft, truck, or other passenger or cargo vehicles could occur within the city limits. Transportation accidents resulting in spills of hazardous materials are addressed in the Hazardous Materials portion of this element.

Railroads
There are no major rail lines that pass in or near Angels Camp.

Severe Weather
Severe weather may occur in the form of wind, rain, snow, ice, extreme cold or heat and/or thunder storms. Calaveras County (including Angels Camp) also has (on rare occasions) been subject to tornado warnings. All of theses conditions could result in loss in life and property, and interruption of transportation and communication systems.

Agricultural Disasters
Any natural or man-caused event interrupting the growing cycle is likely to adversely impact agriculture in the county. Widespread agricultural damage could be caused by blight, chemical spills, drought, fire, flood, hail, or infestations. Agriculture within the city limits is minimal. Therefore, disasters affecting agriculture are unlikely to directly affect Angels Camp.

Radiological Incidents
Radiological incidents may be caused by either a nuclear attack or peace-time emergency. Calaveras County and Angels Camp would not likely experience any of the direct effects of nuclear detonation (i.e., blast, shock, fires) as it lacks the military, industrial and commercial facilities likely to be targeted. Also, the city is not located along a designated radiological materials transportation route.

Civil Disturbances

Public demonstrations tied to conflicts focused towards government agencies or policies, businesses involved in labor disputes, or religion-based disputes may occur in the county. The San Andreas Government Center is recognized as one of the most likely locations for civil disorder to occur. The location within the city limits most likely to support large congregations of persons expressing civil disobedience is Utica Park.

GOALS, POLICIES AND IMPLEMENTATION PROGRAMS

6A. Geologic Hazards

Goal 6.A Protect persons and property from geologic hazards.

Policies

6.A.1 Assess and keep appraised of the potential risks to persons and property from geological hazards within, or with the potential to affect the city.

6.A.2 Reduce exposure to risks in hazardous areas by directing development away from these areas.

6.A.3 Provide guidance to citizens regarding preparing for and responding to emergencies related to earthquakes, volcanic eruptions and other geological hazards that may affect the city.

6.A.4 Make emergency preparedness a city priority and keep the city's emergency response plan updated.

Implementation Programs

6.A.a **Prepare an Emergency Operations Plan and Local Hazard Mitigation Plan for the City**

Using the guidelines provided by the State Office of Emergency Services and the Federal Emergency Management Agency (FEMA), prepare an emergency operations plan and local hazard mitigation plan for Angels Camp. A draft plan should be completed by December 31, 2008. Anticipated contents of the Emergency Operations Plan may include, but are not limited to:

Administration: including responsibilities of government during disaster, emergency plan authorities and references, comprehensive emergency management planning, the incident command system, continuity of government, and preservation of records.

Management Functions and Responsibilities: including activation of the Emergency Service Plan, resource management, assignment of responsibilities, mutual aid, incident command system, emergency operations center, emergency alerting and broadcast system, emergency broadcast system procedures, emergency public information, evacuation, emergency shelter and feeding, donation management, medical care, public health, mass casualties, mass fatalities, and recovery.

Hazard Specific Operations: including aircraft accidents, agricultural disasters, civil disturbance, earthquake, flood/dam failure, hazardous materials, major fire, radiological incidents, severe weather, utility failure, volcanic activities, water supply and impacts related to population influxes resulting from regional disasters.

The Local Hazard Mitigation Plan should consider, but not be limited to consideration of, the following threats: provision of adequate water supply during emergency situations, identifying evacuation routes (including identification of evacuation routes in response to destruction of highway bridges), earthquakes, volcanic eruptions, flooding, inundation from dam failures (in particular local dams and reservoirs that are not regulated by the Federal Energy Regulatory Commission), transportation accidents (air and highway), civil disturbance, acts of terrorism, agricultural disaster, major fires, radiological incidents, severe weather, utility failures, contamination of water supply (biological or chemical), hazardous materials (including, in particular, hazardous materials associated with drug labs, roadside abandonments and the release of chlorine in association with water and wastewater treatment facilities) and other threats as may be identified. The plan should integrate with regional and state emergency plans.

Equivalent Programs: 6Ba (Public Safety), 6Ca (Public Safety), 6Da (Public Safety), 6Ea (Public Safety), 6Fa (Public Safety)
Related program: 6Cc (Public Safety)

6.A.b **Continue to Participate in the Preparation and Implementation of the County/City Hazard Management Plan**

Continue to participate in the preparation and implementation of the county/city Hazard Management Plan.

Equivalent Programs: 6Bb (Public Safety), 6Cb (Public Safety), 6Db (Public Safety), 6Eb (Public Safety), 6Fb (Public Safety)

6.A.c **Investigate the Cost of Requiring New Development to Map Potential Underground Hazards**

Investigate the costs of requiring new development to map mines and tunnels beneath proposed new development. Evaluate whether or not the risk posed by potential subsidence is substantial enough that new development should incur the costs and routinely assess and mitigate these potential hazards.

Related Programs: 6Ad (Public Safety), 7Hf (Public Facilities & Services)

6.A.d **Acquire Maps of Areas Posing a Potential Hazard From Mine or Tunnel Collapse**

Acquire a set of maps of historical mines within the city limits to assist in identifying potential hazards to existing and new development. Examples of maps that may assist in identifying historic mines include: Government Land Office (GLO) maps, United States Geological Survey topographical maps, and Sanborn maps.

Related Programs: 6Ac (Public Safety), 7Hf (Public Facilities & Services)

6.A.e **Require New Development to Evaluate Geotechnical Hazards**

Require new development located within areas of unstable slopes, above underground tunnels, or within 100 feet of a fault rupture zone, or exhibiting evidence of significant subsidence, erosion potential or similar geologic hazard, to conduct an evaluation of potential geotechnical hazards. Adopt standards for consultants qualified to prepare such reports and content of reports.

6.A.f **Require Geotechnical Hazard Evaluations for Critical Use and High Occupancy Structures**

Require developers of dams and critical use and high occupancy structures (e.g., schools, hospitals) to undertake geologic and seismic studies to locate all capable fault traces. Require development located within 100 feet of capable fault zones to demonstrate that project design and construction will accommodate an expected fault offset of the county's design earthquake and continue to function.

6.A.g **Continue to Enforce the Provisions of the Uniform Building Code**

Continue to enforce the provisions of the Uniform Building Code to ensure adequate building standards to withstand maximum credible earthquakes in the area.

6.A.h **Encourage Rehabilitation of Old Buildings**

Amend the City of Angels Municipal Code to address work undertaken on old buildings that require seismic stabilization (e.g., *unreinforced masonry buildings*) and the need to maintain the historic integrity of those buildings consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (**Appendix 8A**). In addition, the amendment should address bracing or stabilizing, rather than removing, architectural features on buildings for seismic safety.

The amendment should address the city's policy towards *Unreinforced Masonry Buildings* (URMs) and voluntary versus non-voluntary measures that the city may request in conjunction with the rehabilitation of URMs consistent with California Government Code Section 8875 *et seq.*, the 1997 *National Earthquake Hazards Reduction Program Provisions for the Development of Seismic Regulations for New Buildings (*NEHRP Provisions*)*, the Uniform Building Code, Executive Order 12699 (*Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction*), State Historic Building Code, and other applicable codes (See also **Appendix 8I**).

Equivalent Program: 8By (Cultural Resources)
Related Programs: 2Ca (Housing), 2Cg (Housing), 2Cm (Housing), 8Bd (Cultural Resources), 8Bt (Cultural Resources), 10Aj (Economic Development)

6.A.i **Designate Identified Hazard Areas Through Appropriate Zoning Where Feasible**

Zone areas within 100 feet of capable fault areas or other identified geological hazard areas as Open Space (OS), Parks and Recreation (REC) or, if appropriate, Public (P) (e.g., land owned by the United States Bureau of Reclamation). Allow recreational uses without structures (e.g., trails) within hazard zones where appropriate.

6.A.j **Draft a Hillside Management Ordinance**

Draft a hillside management ordinance establishing acceptable hillside slope-related densities and alternatives for hillside construction standards that reduce grading and other adverse environmental impacts. The ordinance should address infill development on city lots (in particular, those lots established prior to the adoption of the city's development standards for creating new parcels) and the appropriateness of setbacks, lot sizes, road widths, road-related facilities (e.g., bike ways, sidewalks), parking standards and related development standards.

Equivalent Programs: 1Ce (Land Use), 2Bj (Housing), 3Ec (Circulation), 11Bd (Economic Development)

6.A.k **Require Engineering Studies for Development in Unstable Areas**

Require engineering studies to evaluate development in unstable areas (e.g., slopes exceeding 30%). Evaluate the effects of grading on slope stability including standards limiting fill slopes to 2:1 unless a registered civil engineer or certified engineering geologist can demonstrate that the fill slope will be stable and not prone to erosion.

Related Programs: 1Ee (Land Use), 6Am (Safety), 9Ad (Air Quality), 11Ad (Community Identity)

6.A.l **Prepare a Grading Ordinance/Promote Best Management Practices**

Prepare a grading ordinance addressing: when a grading permit is required, when a grading plan shall be prepared, required contents of a grading plan, anticipated grades before and after construction, the total amount of soil to be removed, location and design of retaining walls, erosion control standards, preparation of erosion control plans, recommended erosion control methods, soil disposal, vegetation retention, revegetation, drainage, requirements for erosion and sediment control plans and other elements, as identified. The ordinance, or a companion publication (either prepared as an original publication or adopted from existing publications), should be prepared/ adopted in conjunction with the grading ordinance and illustrate best management practices. Resources for *Best Management Practices* are listed in **Appendix 4C.**

Equivalent Programs: 1Cf (Land Use), 4Cf (Conservation & Open Space), 4Ga (Conservation & Open Space), 11Ac (Community Identity)

6.A.m **Establish Standards for Erosion and Dust Control**

Establish and adopt standards for erosion and dust control to be included as conditions of approval, conditions of site development or to be otherwise attached as requirements of entitlements issued by the city, as necessary to reduce dust and erosion during construction activities. Methods to be addressed include, but are not limited to:

- Revegetating cut and fill slopes
- Hydroseeding
- Re-vegetation using native grasses
- Use of on-site water trucks or similar devices during non-precipitation periods to control dust emissions and maintain water quality during demolitions, construction, or other dust-generating activities
- Installation of erosion control devices (e.g., silt fences, hay bales) prior to the rainy season
- Measures for protecting soil stability (See **Program 6Ak**)
- Tire-washing stations for trucks leaving construction sites

Equivalent Programs: 1Ee (Land Use), 9Ad (Air Quality), 11Ad (Community Identity)
Related Program: 6Ak (Public Safety)

6.A.n **Keep Appraised of New Seismic Information**

Continue to monitor the Department of Conservation, California Geological Survey website for release of ground shaking maps for Angels Camp and Calaveras County. Update emergency plans and the Safety Element, as necessary, in response to the release of new data.

6.A.o **Provide Emergency Response/Preparation Guidelines for Citizens on The Angels Camp City Website**

Provide a link from the city's website to the Federal Emergency Management Agency (FEMA) website regarding emergency response procedures for citizens. Provide handouts to the public for citizen emergency response procedures available from FEMA. **Appendix 6A** provides a list of some sources of emergency response preparedness information.

Equivalent Programs: 6Bl (Public Safety), 6Cg (Public Safety), 6De (Public Safety), 6Ec (Public Safety), 6Fc (Public Safety)

6B. Flood Hazard & Dam Failure

Goal 6.B Protect persons and property from flooding and inundation from dam failures.

Policies

6.B.1 Make emergency preparedness a city priority.

6.B.2 Keep the city's emergency response plan updated to reflect the most current information available regarding the potential risks to persons and property from flooding and inundation from dam failures within the city.

6.B.3 Provide guidance to citizens for preparing for and responding to floods and inundation from dam failures affecting the city.

6.B.4 Evaluate and minimize potential impacts of new development on drainage facilities and downstream property.

Implementation Programs

6.B.a **Prepare an Emergency Operations Plan and Local Hazard Mitigation Plan For the City**

Using the guidelines provided by the State Office of Emergency Services and the Federal Emergency Management Agency, prepare an emergency operations plan and local hazard mitigation plan for Angels Camp. A draft plan should be completed by December 31, 2008. Anticipated contents of the Emergency Operations Plan may include, but are not limited to:

Administration: including responsibilities of government during disaster, emergency plan authorities and references, comprehensive emergency management planning, the incident command system, continuity of Government, and preservation of records.

Management Functions and Responsibilities: including activation of the Emergency Service Plan, resource management, assignment of responsibilities, mutual aid, incident command system, emergency operations center, emergency alerting and broadcast system, emergency broadcast system procedures, emergency public information, evacuation, emergency shelter and feeding, donation management, medical care, public health, mass casualties, mass fatalities, and recovery.

Hazard Specific Operations: including aircraft accidents, agricultural disasters, civil disturbance, earthquake, flood/dam failure, hazardous materials, major fire, radiological incidents, severe weather, utility failure, volcanic activities, water supply and impacts related to population influxes resulting from regional disasters.

The Local Hazard Mitigation Plan should consider, but not be limited to consideration of, the following threats: provision of adequate water supply during emergency situations, identifying evacuation routes (including identification of evacuation routes in response to destruction of highway bridges), earthquakes, volcanic eruptions, flooding, inundation from dam failures (in particular local dams and reservoirs that are not regulated by the Federal Energy Regulatory Commission), transportation accidents (air and highway), civil disturbance, acts of terrorism, agricultural disaster, major fires, radiological incidents, severe weather, utility failures, contamination of water supply (biological or chemical), hazardous materials (including, in particular, hazardous materials associated with drug labs, roadside abandonments and the release of chlorine in association with water and wastewater treatment facilities) and other threats as may be identified. The plan should integrate with regional and state emergency plans.

Equivalent Programs: 6Aa (Public Safety), 6Ca (Public Safety), 6Da (Public Safety), 6Ea (Public Safety), 6Fa (Public Safety)
Related program: 6Cc (Public Safety)

6.B.b **Continue to Participate in the Preparation and Implementation of the County/City Hazard Management Plan**

Continue to participate in the preparation and implementation of the county/city Hazard Management Plan.

Equivalent Programs: 6Ab (Public Safety), 6Cb (Public Safety), 6Db (Public Safety), 6Eb (Public Safety), 6Fb (Public Safety)

6.B.c **Facilitate Assessment of Hazards Associated with Dam Failures Affecting Angels Camp**

Pursue information from Union Public Utility District (UPUD) addressing potential effects of the failure of UPUD's water treatment facility dam on Angels Camp.

Acquire and maintain copies of the flood inundation maps prepared for the Union, Spicer, and Utica reservoirs and Lake Alpine as part of the city's emergency response plan.

Investigate the potential impacts of a failure of the Ross Reservoir dam on Angels Camp.

6.B.d **Consider Preparation of a Flood Damage Prevention Ordinance**

Consider preparation of a flood damage prevention ordinance to guide development within flood zones identified by the Federal Emergency Management Agency (FEMA).

Related Programs: 1Be (Land Use), 1Bf (Land Use), 4Dd (Conservation & Open Space), 4Gc (Conservation & Open Space), 4Ha (Conservation & Open Space), 6Bg (Public Safety), 11Bb (Community Identity)

6.B.e **Continue to Maintain and Upgrade Storm Drainage Facilities**

Continue to address maintenance and upgrades of the city's drainage facilities. Consider preparation of a Storm Drainage Facilities Management Plan to forecast when systems may require replacement and the potential costs and funding sources necessary to maintain the city's drainage facilities. Continue to pursue sources of funding to ensure ongoing maintenance of the city's storm drains.

Equivalent Program: 7Hb (Public Facilities & Services)
Related Programs: 4Hb (Conservation & Open Space), 6Bf (Public Safety), 6Bh (Public Safety), 6Bj (Public Safety), 6Bk (Public Safety), 7Hb (Public Facilities & Services), 7Hd (Public Facilities & Services), 7He (Public Facilities & Services)

6.B.f **Mitigate Impacts on Downstream Drainage Facilities and Property**

In conjunction with **Program 6.A.k,** address requirements for preparation of drainage plans addressing potential impacts on downstream drainage facilities and properties and requiring implementation of measures identified to reduce or eliminate those impacts. Continue to require drainage plans for private development to prevent inundation of the city's Storm Drainage Facilities.

Equivalent Program: 7Hc (Public Facilities & Services)
Related Programs: 4Hb (Conservation & Open Space), 6Be (Public Safety), 6Bh (Public Safety), 6Bj (Public Safety), 6Bk (Public Safety), 7Hb (Public Facilities & Services), 7Hd (Public Facilities & Services), 7He (Public Facilities & Services)

6.B.g **Designate Resource Management & Open Space Setbacks Along Creeks**

Establish an open space setback encompassing designated flood hazard areas along Angels Creek and Six Mile Creek. Designate these areas as Resource Management (RM) on the city's general plan maps and as Open Space (OS) on the city's zoning maps. Establish similar setbacks along other drainages within the city (e.g., China Gulch) or along drainages in areas that may be annexed into the city in the future.

Equivalent Programs: 1Bf (Land Use), 4Dd (Conservation & Open Space), 4Gc (Conservation & Open Space), 11Bb (Community Identity)
Related Programs: 1Be (Land Use), 4Dc (Conservation & Open Space), 4Ha (Conservation & Open Space)

6.B.h **Coordinate With the County to Address the Impacts of Development Within the Watersheds of Drainages Flowing Through the City**

Request that the county forward all development proposals located within watersheds of drainages flowing through Angels Camp to the city for comment (e.g., Six Mile Creek, Indian Creek, Angels Creek, Greenhorn Creek, Cherokee Creek, Utica Ditch, Jupiter Ditch, Lone Gulch, San Domingo Creek). The city's area of interest, for the purposes of assessing impacts within watersheds of interest, is illustrated in **Map 6A.** Continue to comment on projects within the county with the potential to increase runoff, increase flood hazards and tax drainage systems within the city. Meet with the county to establish a strategy for acquiring funding for preparation of a retention basin master plan and/or standardized mitigation requirements to offset cumulative impacts of individual projects occurring upstream of Angels Camp and resulting in increased runoff, increased flood hazards and overtaxing of drainage systems within the city.

Equivalent Program: 7Hd (Public Facilities & Services)
Related Programs: 1Ia (Land Use), 2Aa (Housing), 2Dg (Housing), 3Bk (Circulation), 4Hb (Conservation & Open Space), 5Ak (Noise), 6Be (Public Safety), 6Bf (Public Safety), 6Bh (Public Safety), 6Bi (Public Safety), 6Bj (Public Safety), 6Bk (Public Safety), 7Cj (Public Facilities & Services), 7Hb (Public Facilities & Services), 7Hc (Public Facilities & Services), 7Hd (Public Facilities & Services), 7He (Public Facilities & Services), 7Id (Public Facilities & Services), 7Ig (Public Facilities & Services), 10Ab (Economic Development), 12Am (Parks & Recreation)

6.B.i **Pursue Funding for Preparation of a Hydrological Study**

Pursue a Community Development Block Grant (CDBG) Technical Assistance Grant, or similar funding, to prepare a drainage study. The study should include, but not be limited to, addressing existing hydrological conditions and projected conditions considering proposed developments within the county upstream of the city and within the city's watershed. The study should further address potential threats to city bridges and roadways from increased runoff and flooding and identify high priority locations for the establishment of drainage basins upstream of the city.

Related Program: 6Bh (Public Safety), 7Hd (Public Facilities & Services)

6.B.j **Coordinate with Appropriate Agencies and Private Landowners to Ensure Debris Removal in Streams to Reduce the Potential for Damage of Downstream Facilities (e.g., Bridges)**

Coordinate with appropriate local, state and/or federal agencies to ensure the removal of debris adjacent to bridges within the city limits that may result in damage and/or destruction of bridges, or damming at bridges, during flood events, thereby limiting emergency access into and out of the city. Update the city's emergency response plan to address the emergency response priority associated with maintenance of the State Route 49 Bridge over Angels Creek.

Consider preparation of standardized mitigation requirements on new development requiring management of stream debris in conjunction with monitoring vegetation clearances for fire safety. Consider facilitating acquisition of a master streambed alteration permit from the California Department of Fish and Game and/or a Federal Clean Water Act Section 404 Permit to facilitate the removal of debris within drainage facilities adjacent to already developed private property to reduce the potential for damage to downstream facilities resulting from inadequate debris removal.

Equivalent Programs: 4Hb (Conservation & Open Space), 7He (Public Facilities & Services)
Related Programs: 6Bf (Public Safety), 6Be (Public Safety), 6Bh (Public Safety), 6Bj (Public Safety), 6Bk (Public Safety), 7Hb (Public Facilities & Services), 7Hc (Public Facilities & Services), 7Hd (Public Facilities & Services)

6.B.k **Design New Bridges (Pedestrian and Automobile) to Minimize Damage From Major Flood Events**

Require new pedestrian and vehicle bridges to incorporate design features that reduce or avoid damage during major flood events, to the extent feasible (e.g., pedestrian bridges designed to pivot at an upstream corner and break away to reduce debris collection).

Related Programs: 4Hb (Conservation & Open Space), 6Be (Public Facilities & Services), 6Bf (Public Safety), 6Bh (Public Safety), 6Bj (Public Safety), 7Hb (Public Facilities & Services), 7Hc (Public Facilities & Services), 7Hd (Public Facilities & Services), 7He (Public Facilities & Services)

6.B.l **Provide Emergency Response/Preparation Guidelines for Citizens on The Angels Camp City Website**

Provide a link from the city's website to the Federal Emergency Management Agency (FEMA) website regarding emergency response procedures for citizens. Provide handouts to the public for citizen emergency response procedures available from FEMA. **Appendix 6A** provides a list of some sources of emergency response preparedness information.

Equivalent Programs: 6Ao (Public Safety), 6Cg (Public Safety), 6De (Public Safety), 6Ec (Public Safety), 6Fc (Public Safety)

6.B.m **Pursue Preparation of Detailed Flood Zone Maps**

Identify funding sources and qualified agencies to prepare detailed flood zone maps establishing flood elevations throughout the city. Consider approaching the Resource Conservation & Development District to assist in preparing the maps.

Equivalent Program: 4.H.g (Conservation & Open Space)
Related Programs: 6Bd (Public Safety), 6Bg (Public Safety), 6Bi (Public Safety)

6C. Emergency Services Plan & Emergency Services

Goal 6.C Undertake adequate preparation for and ensure an adequate response to emergency and disaster situations affecting the city.

Policies

6.C.1 Prepare city staff, to the maximum extent feasible given available funding levels, to respond quickly and adequately to emergency and disaster situations affecting the city.

6.C.2 Provide guidance to citizens regarding preparing for and responding to emergencies to supplement and ensure the smooth implementation of the city's emergency operations plan.

6.C.3 Support the formation of self-help/citizen response teams to aid city agencies in providing emergency response services to a large segment of the city's population.

6.C.4 Make emergency preparedness a city priority and keep the city's emergency response plan updated.

Implementation Programs

6.C.a **Prepare an Emergency Operations Plan and Local Hazard Mitigation Plan for the City**

Using the guidelines provided by the State Office of Emergency Services and the Federal Emergency Management Agency, prepare an emergency operations plan and local hazard mitigation plan for Angels Camp. A draft plan should be completed by December 31, 2008. Anticipated contents of the Emergency Operations Plan may include, but are not limited to:

Administration: including responsibilities of government during disaster, emergency plan authorities and references, comprehensive emergency management planning, the incident command system, continuity of Government, and preservation of records.

Management Functions and Responsibilities: including activation of the Emergency Service Plan, resource management, assignment of responsibilities, mutual aid, incident command system, emergency operations center, emergency alerting and broadcast system, emergency broadcast system procedures, emergency public information, evacuation, emergency shelter and feeding, donation management, medical care, public health, mass casualties, mass fatalities, and recovery.

Hazard Specific Operations: including aircraft accidents, agricultural disasters, civil disturbance, earthquake, flood/dam failure, hazardous materials, major fire, radiological incidents, severe weather, utility failure, volcanic activities, water supply and impacts related to population influxes resulting from regional disasters.

The Local Hazard Mitigation Plan should consider, but not be limited to consideration of, the following threats: provision of adequate water supply during emergency situations, identifying evacuation routes (including identification of evacuation routes in response to destruction of highway bridges), earthquakes, volcanic eruptions, flooding, inundation from dam failures (in particular local dams and reservoirs that are not regulated by the Federal Energy Regulatory Commission), transportation accidents (air and highway), civil disturbance, acts of terrorism, agricultural disaster, major fires, radiological incidents, severe weather, utility failures, contamination of water supply (biological or chemical), hazardous materials (including, in particular, hazardous materials associated with drug labs, roadside abandonments and the release of chlorine in association with water and wastewater treatment facilities) and other threats as may be identified. The plan should integrate with regional and state emergency plans.

Equivalent Programs: 6Aa (Public Safety), 6Ba (Public Safety), 6Da (Public Safety), 6Ea (Public Safety), 6Fa (Public Safety)
Related program: 6Cc (Public Safety)

6.C.b **Continue to Participate in the Preparation and Implementation of the County/City Hazard Management Plan**

Continue to participate in the preparation and implementation of the county/city Hazard Management Plan.

Equivalent Programs: 6Ab (Public Safety), 6Bb (Public Safety), 6Db (Public Safety), 6Eb (Public Safety), 6Fb (Public Safety)

6.C.c **Adopt an Emergency Operations Plan Enabling Ordinance**

Adopt an enabling ordinance in conjunction with an Emergency Operations Plan.

Related Programs: 6Aa (Public Safety), 6Ba (Public Safety), 6Ca (Public Safety), 6Da (Public Safety), 6Ea (Public Safety), 6Fa (Public Safety)

6.C.d **Sponsor Emergency Training for City Personnel**

Enlist the aid of the American Red Cross to conduct a training day to teach (or provide a refresher course for) all city employees CPR, basic first aid, the operation of an automatic external defibrillator and blood borne pathogen training. Coordinate with Calaveras County emergency services personnel to conduct a joint training event.

6.C.e **Conduct Emergency Training Exercises**

Conduct emergency response training exercises. Exercises involving both city and county emergency response agencies are recommended.

6.C.f **Continue to Maintain a City Safety Committee**

Continue to maintain and hold regular meetings of the City Safety Committee to reinforce emergency preparedness.

6.C.g **Provide Emergency Response/Preparation Guidelines for Citizens on The Angels Camp City Website**

Provide a link from the city's website to the Federal Emergency Management Agency (FEMA) website regarding emergency response procedures for citizens. Provide handouts to the public for citizen emergency response procedures available from FEMA. **Appendix 6A** provides a list of some sources of emergency response preparedness information.

Equivalent Programs: 6Ao (Public Safety), 6Bl (Public Safety), 6De (Public Safety), 6Ec (Public Safety), 6Fc (Public Safety)

6.C.h **Pursue the Provision of Paramedic Services for the City**

Investigate the costs of hiring and maintaining a paramedic within the Angels Camp Fire Department.

6.C.i **Encourage City Residents to Receive Training as Part of Citizen Emergency Response Teams**

Consider sending city staff who are residents of Angels Camp through American Red Cross training to become members of Citizen Emergency Response Teams (CERT) to assist locally in emergency situations. Provide announcements on the city's website of upcoming CERT training events to encourage local residents to become trained.

6D. Hazardous Materials

Goal 6.D Protect people and property from risks associated with the use, transport, treatment and disposal of hazardous materials and wastes.

Policies

6.D.1 Encourage citizen opportunities for recycling and disposal of household hazardous materials and wastes.

6.D.2 Continue to work cooperatively with other jurisdictions to manage the use, transport, treatment and disposal of hazardous materials.

6.D.3 Make emergency preparedness a city priority and keep the city's emergency response plan updated.

Implementation Programs

6.D.a **Prepare an Emergency Operations Plan and Local Hazard Mitigation Plan for the City**

Using the guidelines provided by the State Office of Emergency Services and the Federal Emergency Management Agency, prepare an emergency operations plan and local hazard mitigation plan for Angels Camp. A draft plan should be completed by December 31, 2008. Anticipated contents of the Emergency Operations Plan may include, but are not limited to:

Administration: including responsibilities of government during disaster, emergency plan authorities and references, comprehensive emergency management planning, the incident command system, continuity of Government, and preservation of records.

Management Functions and Responsibilities: including activation of the Emergency Service Plan, resource management, assignment of responsibilities, mutual aid, incident command system, emergency operations center, emergency alerting and broadcast system, emergency broadcast system procedures, emergency public information, evacuation, emergency shelter and feeding, donation management, medical care, public health, mass casualties, mass fatalities, and recovery.

Hazard Specific Operations: including aircraft accidents, agricultural disasters, civil disturbance, earthquake, flood/dam failure, hazardous materials, major fire, radiological incidents, severe weather, utility failure, volcanic activities, water supply and impacts related to population influxes resulting from regional disasters.

The Local Hazard Mitigation Plan should consider, but not be limited to consideration of, the following threats: provision of adequate water supply during emergency situations, identifying evacuation routes (including identification of evacuation routes in response to destruction of highway bridges), earthquakes, volcanic eruptions, flooding, inundation from dam failures (in particular local dams and reservoirs that are not regulated by the Federal Energy Regulatory Commission), transportation accidents (air and highway), civil disturbance, acts of terrorism, agricultural disaster, major fires, radiological incidents, severe weather, utility failures, contamination of water supply (biological or chemical), hazardous materials (including, in particular, hazardous materials associated with drug labs, roadside abandonments and the release of chlorine in association with water and wastewater treatment facilities) and other threats as may be identified. The plan should integrate with regional and state emergency plans.

Equivalent Programs: 6Aa (Public Safety), 6Ba (Public Safety), 6Ca (Public Safety), 6Ea (Public Safety), 6Fa (Public Safety)
Related program: 6Cc (Public Safety)

6.D.b **Continue to Participate in the Preparation and Implementation of the County/City Hazard Management Plan**

Continue to participate in the preparation and implementation of the county/city Hazard Management Plan.

Equivalent Programs: 6Ab (Public Safety), 6Bb (Public Safety), 6Cb (Public Safety), 6Eb (Public Safety), 6Fb (Public Safety)

6.D.c **Continue to Implement the County/City Multi-Jurisdictional Household Hazardous Waste Element**

Continue to implement the programs adopted in the Multi-Jurisdictional Household Hazardous Waste Element designed to reduce the amount of household hazardous waste (HHW) generated within Calaveras County, including periodic drop-off days for all household hazardous wastes, on-going drop-off program for recyclable household hazardous waste, public education regarding household hazardous waste reduction, and monitoring the success of these selected programs.

Related Program: 4Hf (Conservation & Open Space)

6.D.d **Maintain an Inventory of Sites Storing or Using Hazardous Materials**

The Angels Fire Department should regularly update, and consider mapping, sites included on its list of sites with Hazardous Materials Business Plans (as provided by the Calaveras County Environmental Health Department and supplemented by the Angels Camp Fire Department) with accompanying hazardous material information to facilitate access to hazardous materials information during spills or releases.

Related Programs: 4Hf (Conservation & Open Space), 6Dc (Public Safety)

6.D.e **Provide Emergency Response/Preparation Guidelines for Citizens on the Angels Camp City Website**

Provide a link from the city's website to the Federal Emergency Management Agency (FEMA) website regarding emergency response procedures for citizens. Provide handouts to the public for citizen emergency response procedures available from FEMA. **Appendix 6A** provides a list of some sources of emergency response preparedness information.

Equivalent Programs: 6Ao (Public Safety), 6Bl (Public Safety), 6Cg (Public Safety), 6Ec (Public Safety), 6Fc (Public Safety)

6.D.f **Expand Opportunities for Recycling in the City Including *E-Cycling***

Support the establishment of new or expansion of existing recycling facilities in or near the city limits that encourage recycling of a wide variety of resources, including recycling of electronic wastes (*e-cycling*).

Equivalent Program: 4Bf (Conservation & Open Space)
Related Program: 4Bg (Conservation & Open Space)

6E. Water Supply, Utilities & Communications

Goal 6.E Facilitate the provision of an adequate supply of water, and essential utilities and communications for city residents during emergency situations.

Policies

6.E.1 Provide the necessary tools to reduce the impacts of disruptions in water and other essential utilities and communications during emergency situations.

6.E.2 Proactively plan for emergency response during situations affecting the city water supply and essential services and communications.

6.E.3 Coordinate with public utility agencies in the preparation of emergency operations plans.

6.E.4 Make emergency preparedness a city priority and keep the city's emergency response plan updated.

Implementation Programs

6.E.a **Prepare an Emergency Operations Plan and Local Hazard Mitigation Plan for the City**

Using the guidelines provided by the State Office of Emergency Services and the Federal Emergency Management Agency, prepare an emergency operations plan and local hazard mitigation plan for Angels Camp. A draft plan should be completed by December 31, 2008. Anticipated contents of the Emergency Operations Plan may include, but are not limited to:

Administration: including responsibilities of government during disaster, emergency plan authorities and references, comprehensive emergency management planning, the incident command system, continuity of Government, and preservation of records.

Management Functions and Responsibilities: including activation of the Emergency Service Plan, resource management, assignment of responsibilities, mutual aid, incident command system, emergency operations center, emergency alerting and broadcast system, emergency broadcast system procedures, emergency public information, evacuation, emergency shelter and feeding, donation management, medical care, public health, mass casualties, mass fatalities, and recovery.

Hazard Specific Operations: including aircraft accidents, agricultural disasters, civil disturbance, earthquake, flood/dam failure, hazardous materials, major fire, radiological incidents, severe weather, utility failure, volcanic activities, water supply and impacts related to population influxes resulting from regional disasters.

The Local Hazard Mitigation Plan should consider, but not be limited to consideration of, the following threats: provision of adequate water supply during emergency situations, identifying evacuation routes (including identification of evacuation routes in response to destruction of highway bridges), earthquakes, volcanic eruptions, flooding, inundation from dam failures (in particular local dams and reservoirs that are not regulated by the Federal Energy Regulatory Commission), transportation accidents (air and highway), civil disturbance, acts of terrorism, agricultural disaster, major fires, radiological incidents, severe weather, utility failures, contamination of water supply (biological or chemical), hazardous materials (including, in particular, hazardous materials associated with drug labs, roadside abandonments and the release of chlorine in association with water and wastewater treatment facilities) and other threats as may be identified. The plan should integrate with regional and state emergency plans.

Equivalent Programs: 6Aa (Public Safety), 6Ba (Public Safety), 6Ca (Public Safety), 6Da (Public Safety), 6Fa (Public Safety)
Related program: 6Cc (Public Safety)

6.E.b **Continue to Participate in the Preparation and Implementation of the County/City Hazard Management Plan**

Continue to participate in the preparation and implementation of the county/city Hazard Management Plan.

Equivalent Programs: 6Ab (Public Safety), 6Bb (Public Safety), 6Cb (Public Safety), 6Db (Public Safety), 6Fb (Public Safety)

6.E.c **Provide Emergency Response/Preparation Guidelines for Citizens on the Angels Camp City Website**

Provide a link from the city's website to the Federal Emergency Management Agency (FEMA) website regarding emergency response procedures for citizens. Provide handouts to the public for citizen emergency response procedures available from FEMA. **Appendix 6A** provides a list of some sources of emergency response preparedness information.

Equivalent Programs: 6Ao (Public Safety), 6Bl (Public Safety), 6Cg (Public Safety), 6De (Public Safety), 6Fc (Public Safety)

6.E.d **Support the Efforts of the Local HAM Radio Club /Radio Amateur Civil Emergency Services (RACES)**

Support the efforts of the local HAM Radio Club [e.g., Radio Amateur Civil Emergency Services (RACES)] to facilitate communications during emergency situations.

Related Programs: 1Fc (Land Use), 6Ee (Public Safety), 7Gc (Public Facilities & Services), 10Ag (Economic Development)

6.E.e **Support the Efforts of KVML and Local Access Television to Provide Emergency Updates to Citizens**

Support the efforts of KVML Radio and local access television to provide emergency updates and information to citizens.

Related Programs: 1Fc (Land Use), 6Ed (Public Safety), 7Gc (Public Facilities & Services), 10Ag (Economic Development)

6.E.f **Increase Water Storage Capacity**

In future updates of the water master plan, identify additional locations for new water storage facilities (or expansion of existing facilities), estimate the costs of establishing and acquiring these new facilities and estimate the capacity needed within new water storage facilities sufficient to meet the demands of the city during emergency situations. The city anticipates that a minimum of three day supply of water should be available for emergency situations, with a goal of providing five to seven days' water storage. Facilities to be considered include, but are not limited to, the addition of new storage tank(s) and/or a new reservoir(s). Funding sources for new facilities should address the impacts of new development on city water demand and allocate a proportionate share of the cost of new water storage facilities to new development.

Equivalent Program: 7Bk (Public Facilities & Services)
Related Programs: 1Ag (Land Use), 2Bf (Housing), 2Bh (Housing), 4Gh (Conservation & Open Space), 7Ba (Public Facilities & Services), 7Bh (Public Facilities & Services), 7Bj (Public Facilities & Services), 10Ae (Economic Development)

6.E.g **Maintain Information Pertaining to Water Resources in Mines, Underground Rivers and High-Production Wells**

Maintain the information contained in **Appendix 4A** relative to mine locations and information in **Appendix 6B** relative to underground rivers. Map the locations of high-production wells throughout the city. This information should be used to identify potential water sources during emergencies.

Equivalent Program: 4Gj (Conservation & Open Space)

6.E.h **Maintain Information Pertaining to the Use of Untreated or Semi-Treated Water During Emergency Situations**

Include in the city's Emergency Operations Plan information pertaining to the use of untreated or semi-treated (i.e., Title 22) water during emergency situations.

Related Program: 4Ge (Conservation & Open Space), 6Eg (Public Safety)

6F. Transportation, Severe Weather, Radiological Incidents

Goal 6.F Prepare city staff, agencies and citizens to respond in a coordinated and cooperative manner to emergency situations.

Policies

6.F.1 Provide city staff, agencies and citizens with adequate information necessary to respond in a coordinated and cooperative manner during emergency situations.

6.F.2 Facilitate and encourage citizen self-help during emergency situations.

6.F.3 Make emergency preparedness a city priority and keep the city's emergency response plan updated.

Implementation Programs

6.F.a **Prepare an Emergency Operations Plan and Local Hazard Mitigation Plan for the City**

Using the guidelines provided by the State Office of Emergency Services and the Federal Emergency Management Agency, prepare an emergency operations plan and local hazard mitigation plan for Angels Camp. A draft plan should be completed by December 31, 2008. Anticipated contents of the Emergency Operations Plan may include, but are not limited to:

Administration: including responsibilities of government during disaster, emergency plan authorities and references, comprehensive emergency management planning, the incident command system, continuity of Government, and preservation of records.

Management Functions and Responsibilities: including activation of the Emergency Service Plan, resource management, assignment of responsibilities, mutual aid, incident command system, emergency operations center, emergency alerting and broadcast system, emergency broadcast system procedures, emergency public information, evacuation, emergency shelter and feeding, donation management, medical care, public health, mass casualties, mass fatalities, and recovery.

Hazard Specific Operations: including aircraft accidents, agricultural disasters, civil disturbance, earthquake, flood/dam failure, hazardous materials, major fire, radiological incidents, severe weather, utility failure, volcanic activities, water supply and impacts related to population influxes resulting from regional disasters.

The Local Hazard Mitigation Plan should consider, but not be limited to consideration of, the following threats: provision of adequate water supply during emergency situations, identifying evacuation routes (including identification of evacuation routes in response to destruction of highway bridges), earthquakes, volcanic eruptions, flooding, inundation from dam failures (in particular local dams and reservoirs that are not regulated by the Federal Energy Regulatory Commission), transportation accidents (air and highway), civil disturbance, acts of terrorism, agricultural disaster, major fires, radiological incidents, severe weather, utility failures, contamination of water supply (biological or chemical), hazardous materials (including, in particular, hazardous materials associated with drug labs, roadside abandonments and the release of chlorine in association with water and wastewater treatment facilities) and other threats as may be identified. The plan should integrate with regional and state emergency plans.

Equivalent Programs: 6Aa (Public Safety), 6Ba (Public Safety), 6Ca (Public Safety), 6Da (Public Safety), 6Ea (Public Safety)
Related program: 6Cc (Public Safety)

6.F.b **Continue to Participate in the Preparation and Implementation of the County/City Hazard Management Plan**

Continue to participate in the preparation and implementation of the county/city Hazard Management Plan.

Equivalent Programs: 6Ab (Public Safety), 6Bb (Public Safety), 6Cb (Public Safety), 6Db (Public Safety), 6Eb (Public Safety), 6Fb (Public Safety)

6.F.c **Provide Emergency Response/Preparation Guidelines for Citizens on the Angels Camp City Website**

Provide a link from the city's website to the Federal Emergency Management Agency (FEMA) website regarding emergency response procedures for citizens. Provide handouts to the public for citizen emergency response procedures available from FEMA. **Appendix 6A** provides a list of some sources of emergency response preparedness information.

Equivalent Programs: 6Ao (Public Safety), 6Bl (Public Safety), 6Cg (Public Safety), 6De (Public Safety), 6Ec (Public Safety)